REMARKS

This application has been reviewed in light of the Office Action dated March 16, 2004. Claims 1-15 are presented for examination. Claims 1 and 2 are independent and claim 9 has been re-written to be in independent form. Favorable reconsideration and allowance are respectfully requested.

Applicants note with appreciation the indication that claims 9, 3 and 13 would be allowable if re-written to be in independent form. Claim 9 has been so re-written, and Applicants respectfully submit that it, along with its dependent claims 3 and 13, are now in condition for allowance.

The Office Action rejected claims 1, 2, 4-8, 10-12, 14 and 15 under 35 U.S.C. 103(a) as being unpatentable over Polan (U.S. Patent No. 5,094,298) in view of Evans, Jr. et al (U.S. Patent No. 5,864,287). These rejections are respectfully traversed.

As recited in the independent claims, the present invention relates to a combination of a chamber, a low melting point temperature sensor and a safety device. Substances in the chamber are exposed to high frequency radiation. The temperature sensor is arranged in a pressure line, and both the sensor and the pressure line are mounted in the chamber. A safety device responds to the melting of the sensor, or to a change in pressure in the pressure line produced by the melting of the sensor, to control the temperature in the chamber.

Chemical reactions and processes are often initiated or accelerated by the introduction of energy. Typically, reaction mixtures are arranged in a locked vessel, and energy is introduced through the application of radiation. As a rule, access cannot be readily gained to the interior of the vessel in the event of a fire, explosion or the like.

As a result, so-called safety devices are sometimes incorporated into the vessels. These conventional devices, however, have drawbacks. Most notably, they are configured to control the supply of energy to the system when a dangerous condition is detected, but do nothing to remove the danger itself. The present invention overcomes this drawback by providing a system in which a low melting point temperature sensor acts in concert with a safety device to provide a true safety solution. In particular, the safety device responds to the melting of the sensor, or to a change in pressure produced by the melting of the sensor, to control the temperature in the chamber. In this manner, the danger which caused the sensor to melt may be effectively removed.

Polan relates to a fire-sprinkler type apparatus that operates in an open-space, such as a room. This is in stark contrast to the present invention, in which the sensor and pressure line are situated in a chamber in which an exposure to high frequency process is carried out, and in which the temperature in the chamber is controlled when the sensor melts.

The Office Action states that the device of Polan can be used in a chamber in which high frequency exposure processes are carried out. Applicants respectfully disagree, and respectfully submit that the structure of Polan is completely unsuitable for incorporation into such a chamber. For example in Polan, the temperature responsive means 34 includes a tubular member 48, which Polan states should be of a highly thermally conductive material to facilitate the responsiveness of the temperature sensitive means to temperatures outside the tubular member. (See Polan at Col. 8:24-28.) Such conductive materials are typically not suitable for incorporation into a chamber of the type recited in the present claims, since they typically have an effect on high frequency radiation.

Other parts of the Polan structure are clearly made of materials unsuitable for incorporation into a high frequency chamber as well. For example:

- "The tubular body 11 is preferably fabricated of a generally non-corrosive material, such as a bronze alloy . . ." (Polan at Col. 3:46-48).

- "The valve means 20 is . . . preferably fabricated of a generally inflexible, non-corrosive material, such as a bronze alloy." (Polan at Col. 4:9-13).

- "The biasing means 40 should comprise a material which is generally non-corrosive and which is compatible with the materials comprising the vale means 20 and the tubular body 11, preferably a non-corrosive metal, such as stainless steel." (Polan at Col. 4:53-58).

- "The locking means housing 24 contains the locking balls 26, the locking disc 28 and the temperature responsive means 34 and should also be fabricated of a generally non-corrosive material, such as bronze alloy." (Polan at Col. 5:26-29).

All of the components above, and most other components of the Polan system, are made of materials that cannot be put into a high frequency chamber. Indeed, to do so would almost certainly cause sparks to be generated within the chamber, which in turn would cause the very conditions that the safety device of the present invention seeks to control. Polan, therefore, is completely inopposite.

The remaining rejected claims depend from claim 1 or claim 2, and each partakes in the novelty and nonobviousness of its respective base claim. Further, those claims recite additional patentable features of the present invention, and individual reconsideration of each is respectfully requested.

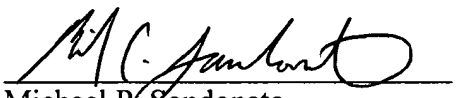
CONCLUSION

This Amendment After Final Action is believed to clearly place this application in condition for allowance and, therefore, its entry is believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, it is respectfully requested that the Examiner contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



Michael P. Sandonato
Attorney for Applicants
Registration No. 35,345

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

NY_MAIN 417556v1